

ON
THE STRATHPEFFER SPA.

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*The following brief treatise on the Strathpeffer Spa, intended specially for the medical profession, was sent as a communication to "The Lancet." The editor, however, finding it too long for insertion, and having suggested that it might be issued as a pamphlet (*Lancet*, June 23, 1866), the author now begs to submit it in that form.*

Strathpeffer, June 1866.

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The Strathpeffer Spa.



THIS Spa, now of no inconsiderable celebrity, and evidently destined sooner or later to occupy a very prominent position among the Spas of Europe, has its own special claim on the attention of the medical profession. As a health-resort, in several varieties of disease, its importance cannot well be over-rated.

It is situate about twenty-five miles north-west of Inverness, in the county of Ross, on the property of her Grace the Duchess of Sutherland, and is pleasantly accessible by 'bus, in a drive of five miles from the Dingwall Station of the Inverness and Bonar-Bridge Railway. Since the latter part of last century it has been much re-

sorted to by health-seekers, coming chiefly from the more northerly counties of Scotland. Of late, as facilities for travelling by railway have increased, it has become frequented by visitors from all parts of England and Scotland, the healing virtues of its waters, practically demonstrated in numberless cases, forcing it more and more on the attention of those in quest of health. By nature the place is eminently suited as a resort for invalids. The village, with its lodging-houses and hotels, stands at a height of some two hundred feet above the level of the sea, occupying a rising ground at the western extremity of the strath or valley which is called Strathpeffer. It is well sheltered by high hills on the north, south, and west sides, the Ben-Wyvis range of mountains protecting it from the north. In the easterly direction it commands a beautiful view of the cultivated strath, with its hills rising on each side. The scenery of the district is of the most varied and picturesque description, combining mountain, loch, river, wood, and cultivated country. There is the most ample scope for patients, who are able, to benefit by out-door exercise and air. They may enjoy either the lighter amusements of the

pleasure-grounds connected with the Spa, and an endless variety of walks in the immediate neighbourhood; or, if inclined for more active exercise, they may have it to any extent in rambles among the adjoining hills.

In the event of its raining, which, from the sheltered position of the place, is comparatively rare, patients may still enjoy the advantages of walking exercise in the pump-room buildings or under the verandahs. There are various places of interest in the neighbourhood, which throughout the season attract daily excursion parties. Some of these are within walking distance, while to the more remote delightful drives through the varied scenery may be had.

The climate of the valley is mild and dry, the air of its higher localities powerfully bracing, the district on the whole remarkably healthy.

The mineral waters are cold, sulphurous, saline. They have been analysed by Dr Medlock of London, Dr Murray Thomson of Glasgow, the late Dr Thomson of Glasgow, and others. Being sulphurous, they resemble the sulphurous waters of Harrogate, Moffat, and Aix-la-Chapelle. The sulphur-element, however, in one or other state, enters more largely into them

than into any of these. They are pre-eminently rich in sulphuretted hydrogen gas. According to a short report on them and other sulphur-waters, by Professor Christison, they are the strongest in this respect yet known in Britain. The saline ingredients occur in varying proportions in the different wells. They are the sulphates of magnesia, soda, and lime, the chloride of sodium, and one or two alkaline carbonates. Salts of iron are also present in several of the wells. The predominating salt is the sulphate of magnesia. In the sulphur-waters of Harrogate, Moffat, and Aix-la-Chapelle the predominating salt is the chloride of sodium. The sulphates of magnesia and soda in the waters of Strathpeffer do not exist in such abundance as to render them markedly, or even invariably aperient, although taken in large quantities; their action being specially on the kidneys, on which they act with very great energy and promptitude. In this particular they differ in their action from the stronger waters of Harrogate, and resemble more the sulphur-water of Moffat, the predominating salt in the former of these existing in such abundance as to render them aperient when taken in comparatively small

quantities. The total saline ingredients in the waters of Strathpeffer are much less than in the waters of Harrogate. On this account, the Strathpeffer waters, when taken, are more easily absorbed; and the greater the amount of water received into the circulation the greater must be the specific influence of the sulphureous ingredients present in it. At the same time, owing to the prompt diuretic, and (as we shall see) diaphoretic actions of the water, it admits of the dose being frequently repeated. I would not, however, be understood to say that the greater the amount imbibed the greater always will be the benefit to the patient.

The water, as being sulphurous, exerts a stimulant action on the muscular coat of the alimentary canal. Received into the general circulation, it exerts a stimulant influence on the nervous system and on the capillary circulation of the skin, inducing diaphoresis, and no doubt aiding in the nutrition of the skin by supplying it with sulphur. Its stimulant action on the nervous system is indicated by its producing "a feeling of exhilaration and alertness." Its diaphoretic action is of course favoured by exercise. A somewhat extraordinary fact, which

shows at once the strong sulphurous impregnation of the water, and its relation to the skin, is, that if the underclothing of a person who has for some time been taking the water be shaken over a fire, the impurities derived from the skin will burn with a blue colour like particles of sublimed sulphur. The water may be said to be actively diuretic and diaphoretic, stimulant to the nervous system, and generally more or less laxative. It is also emmenagogue. Several of the springs being chalybeate, are at the same time haemetic.

With regard to the medicinal properties of the water, one of the earliest and most marked effects accompanying a course of it, is a quickening of the appetite; and this, it may be said, takes place in every instance in which the water is fully admissible. A stimulant influence being exerted by it on the nervous system, functional energy would thus be excited in the organs of digestion. At the same time, the action of water on the system being to increase the general waste of tissue, increase of appetite would become established in order to the compensation of this waste, while the diaphoretic and diuretic actions of the water would stimulate to increased absorption at

the bowel, as exhalation from the leaves of plants stimulates to absorption at their roots. In the various forms of the more ordinary dyspeptic ailments the use of the water is attended with the best results. Other causes besides the above no doubt operate in the production of these results. The water, while exerting a stimulant action on the muscular coat of the alimentary canal, and acting generally to some extent as an aperient, will also fluidify, and so facilitate the flow of the bile. At the same time, the change of air and scene, the freedom from business, and the outdoor amusements and exercise, from the stimulus they afford to the presiding nervous system, and to the system in general, play no unimportant part. That the water by itself, however, is effectual in quickening the appetite and improving digestion, is attested by the fact that the people living in the district, and others at a distance to whom it is sent, experience these effects from its use. The greatest advantage also results from its use in the more curable chronic hepatic affections, and in dilated states of the haemorrhoidal veins. With increased absorption at the bowel there will be increased action in the liver, while the circulation through the latter would be faci-

litated by the water acting as a diluent to the portal blood. Sluggish conditions of the liver would thus be improved. Its increased activity, along with the facilitated circulation of the portal blood, and the action of the water on the bowel would tend to relieve dilated conditions of the haemorrhoidal veins. "A specific influence" over the liver and haemorrhoidal veins, is ascribed by Professor Pereira to sulphuretted hydrogen water. In cases where the bile has difficulty in finding its way into the duodenum, it is evident the use of the water as a diluent will tend to favour its flow.

From the influence of the water in sharpening the appetite and improving digestion, it might be inferred that the employment, especially of its chalybeate varieties, in the treatment of serofulous affections, should be productive of good. Experience has shown this to be the case. Digestion being improved, and there being a strong, pure air to breathe, a healthier condition of blood than before is brought about. Increased vital activity in the nervous system is thus further engendered. A healthier deposition of healthier tissue-forming material takes place, while the feebly-vitalised strumous deposit perishes and is absorbed. But

although the use of the water is attended with the best results in scrofulous affections generally, yet if there exists tubercular disease of the lungs, experience has shown its employment to be attended with the most disastrous consequences. Such cases have not, however, come under my own observation. Visitors who may come to the Spa with symptoms of phthisis, are at once cautioned by the people of the place against taking the water. From accounts gathered, its tendency in these cases would appear to be to accelerate to exhaustion the retrogressive metamorphosis of tissue. It favours also sweating and diarrhoea, and increases the cough. From the experiments of M. C. Bernard, we learn that sulphuretted hydrogen injected into the venous system, is almost entirely eliminated by the lungs. The elimination, then, of this gas, along with the increased elimination which must accompany the increased disintegration of tissue, would throw too much work on the lungs already in a diseased state. Possibly, however, where phthisis is recognised in its very earliest stages, the use of the water in small quantities might be attended with advantage.

It is, however, for the cure and alleviation of

chronic rheumatic affections, chronic and rheumatic gout, and obstinate cutaneous diseases, that these waters are more especially renowned. The grand indications to be fulfilled in the treatment of these diseases, speaking generally, being, to obtain a healthy digestion and increased excretory energy, it must be evident from what has been already said regarding the general action of the waters, that they are admirably adapted to meet these requirements. From the experiments of Dr Mosler of Giessen, both with ordinary water and with the bitter water of Friedrichshall, we may safely conclude that the action of the Strathpeffer water also is to diminish the amount of uric acid in the urine and to increase the amount of urea. The alkaline carbonates would at the same time tend to correct the acidity, which exists more or less in gouty and rheumatic affections. Gouty concretions occasionally disappear under the influence of the water, while in rheumatic gout, enlargements of the articular textures undergo diminution, frequently until no trace of enlargement can be recognised. The efficiency of sulphur-waters in chronic cutaneous diseases is pretty well known.

Very many cases might be adduced to prove

the remarkable therapeutic efficiency of these waters in the above complaints. Provided they are fully admissible and have fair play, their employment can scarcely fail, sooner or later, to be productive of good, while, by combining their external application in the form of bath with their internal use, their curative powers are much increased. Patients, however, whose systems are surcharged with morbid material are not likely to be much benefited by a short trial of the water. Patience in such cases must be exercised: the water must be allowed its own time. But when in any case a prolonged use of the water is required, it is by no means necessary that the patient make a continuous stay at the Wells. He may, with benefit to himself, occasionally intermit the use of the water, and return home, or enjoy other changes of air. When its use is thus left off for a time, the functions of the various organs, previously acted on, continue still to be performed with increased energy, and the progressive gains ground over the retrogressive metamorphosis of tissue. During a continuous course of the water, although the consumption of food is much increased, the weight of the body is, as a rule, more or less diminished. When its

use is left off, the body-weight again rapidly increases.

It frequently happens that more good is experienced after, than during, a course of the water. Biliary and urinary calculi, as might be expected, are occasionally discharged under its influence. In some varieties of dropsy its use is attended with the best results, in others it is inadmissible. Syphilitic affections, owing to its expulsive energy, frequently appear aggravated by it at first, but its use being still persevered with, they generally ultimately succumb. Its use is indicated in gravelly deposits. Owing no doubt to its influence in improving the state of the blood, and in stimulating the capillary circulation of the skin while aiding in its nutrition, its use, along with any of the ordinary external appliances in varicose ulcers, is attended with the best results. It is also very efficacious in other ill-conditioned sores. It is contra-indicated in confirmed epilepsy, and in determination of blood to the head.

By occasionally confining itself in its action to the kidneys, or to the kidneys and skin, it induces constipation, when a concurrence of laxatives is requisite.

During a two years' residence at the Wells,

I have had abundant proof of the great superiority of the water over ordinary medicines, in the treatment of those affections for which it is generally used. Very rarely is it ineffectual even in the most inveterate cases.

